



Tour Stop 4 – Investigation Area H1

Dwight Gemar, Weston Solutions Inc., discusses the environmental activities occurring in Investigation Area H1, including the proposed landfill slurry wall.

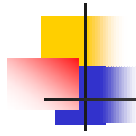
**Mare Island Restoration Advisory Board
Site Tour
October 25, 2003**

Investigation Area H1



Investigation Area H1





Investigation Area H1 Tour Sites

- Oil Sump Area (IR02)
- Facility/RCRA Landfill (IR01)
- Industrial Wastewater Treatment Plant/Surface Impoundments (IR06)



Oil Sump Area History

- Oil discarded in the unlined sumps included petroleum waste oils, engine lubrication oils, hydraulic oil, and cutting oil
- First known sump was constructed south of Dump Road in the early 1940's
- Sumps were subsequently filled with soil in the late 1960's and early 1970's

1954 Oil Sump Aerial Photo



2002 Oil Sump Test Excavation





RCRA/Facility Landfill History

- Includes the fenced RCRA/Facility landfill
- The original "Facility Landfill" operated from 1965 until 1977
- Wastes are assumed to include garbage, spent abrasives, scrap metal, shipboard waste, waste paint, solvents, acids, caustics, cleaning fluids, freon, corrosives, waste oil, grease, infectious wastes, lead-acid batteries, asbestos, construction debris, and mercury wastes



RCRA/Facility Landfill History (cont'd)

- A new "RCRA Landfill" was established in 1978 on top of the western half of the facility landfill
- RCRA landfill accepted RCRA wastes from 1980 until 1989 when the facility was closed

RCRA/Facility Landfill in 1985



IWTP/Surface Impoundment Area

- Industrial Wastewater Treatment Facility (IWTP) constructed in 1972
- Used for the treatment of industrial and hazardous wastewater
- Includes the former IWTP surface impoundments, sludge processing equipment and tanks, and the wastewater processing facility

IWTP/Surface Impoundment (cont'd)

- Four unlined surface impoundments were constructed in 1972
- Impoundments were upgraded with reinforced concrete and PVC liners in 1981-82
- Impoundments were removed from service in 1988 and covered with soil in 1989
- The IWTP and associated facilities have not been used since Shipyard closure in April 1996

IWTP/Surface Impoundment in 1985





Proposed Containment Remedy

- Containment area includes:
 - All of the following historical landfill areas:
 - RCRA/Facility Landfill
 - Industrial Wastewater Treatment Plant (IWTP)
 - IWTP Sludge Treatment/Surface Impoundment Area
 - Waste Oil Sump Area
 - Portions of the following historical landfill subareas:
 - Lead Oxide Storage Area
 - Northwest Dump Road Subarea
 - West Subarea.



Proposed Containment Remedy (cont'd)

- Containment method includes:
 - Horizontal cap
 - Vertical groundwater barrier with extraction trench

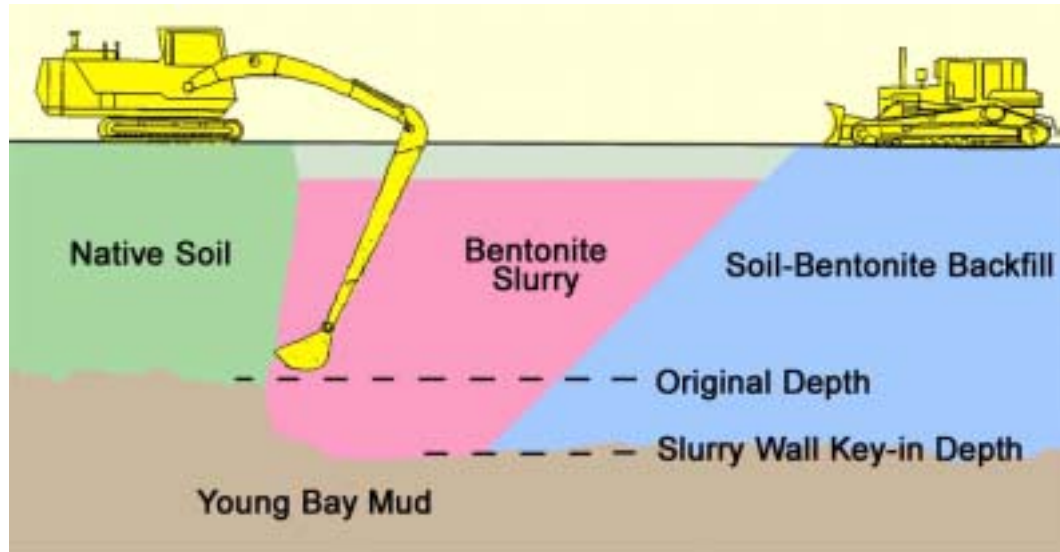
Containment Area



Vertical Groundwater Barrier

- Vertical groundwater barrier and extraction trench
 - 7,300 linear feet; enclosing the containment area
 - 15-25 deep (keyed into underlying Young Bay Mud)
- Low permeability soil-bentonite barrier (slurry wall) will restrict lateral groundwater flow

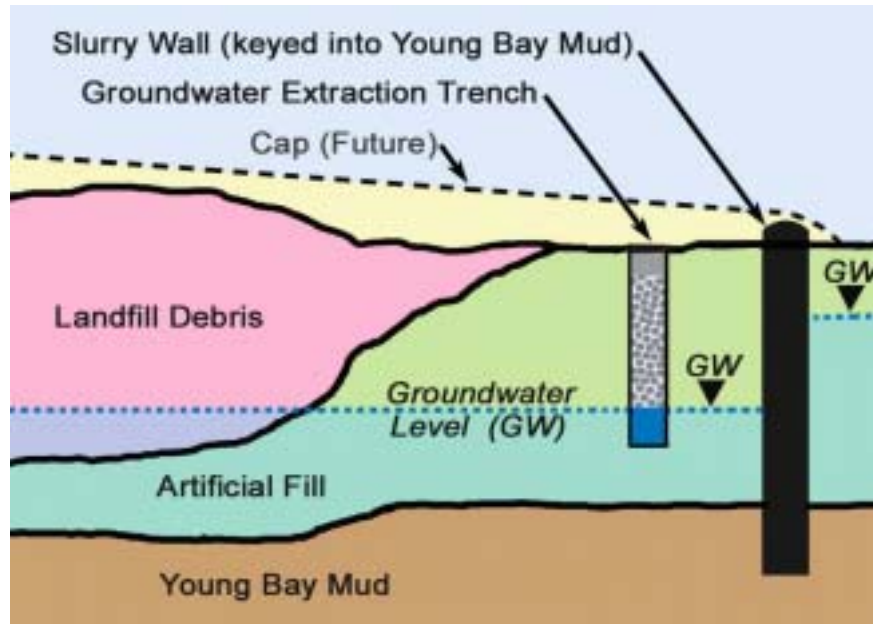
Slurry Wall Installation



Groundwater Extraction Trench

- Extraction trench will lower groundwater level in the containment
- Lower groundwater level will further reduce migration
- Groundwater will tend to flow into the containment rather than out

Containment Cross-Section



Groundwater Treatment

- Oil/water separator
- Arsenic Removal (if required)
- Discharge to Vallejo SFCD